

IN THE CLAIMS

Kindly replace the present claims by the following set of claims:

1.-28. (Cancelled)

29. (Currently Amended) A method of nuclear imaging, including acquiring attenuation data for correcting the nuclear image, comprising:

acquiring nuclear emission data over a first axially extending portion of the body;

determining the extent of a radioactive region of interest in the body; [[and]]

acquiring transmission data over a second axially extending portion of the body, responsive to the determined extent; and

generating three dimensional emission values from the nuclear emission corrected by said transmission data.

30. (Original) A method according to claim 29 wherein the second axially extending portion is smaller than the first axially extending portion.

31. (Previously Presented) A method according to claim 29 wherein determining an extent comprises acquiring a planar nuclear emission image.

32. (Previously Presented) A method according to claim 29 wherein determining an extent comprises determining said extent from said acquired nuclear emission data.

33. (Previously Presented) A method according to claim 29 wherein the transmission data is acquired using an X-Ray source.

34. (Previously Presented) A method according to claim 29 wherein the transmission data is acquired using a gamma ray source.

35. (Original) A method according to claim 31 wherein the transmission data is acquired using a gamma ray source.

36. (Original) A method according to claim 31 wherein the transmission data is acquired using a gamma ray source.

37. (Original) A method according to claim 32 wherein the transmission data is acquired using a gamma ray source.

38. (Original) A method according to claim 32 wherein the transmission data is acquired using a gamma ray source.

39. (Original) A method according to claim 33 wherein the transmission data is acquired using a gamma ray source.

40. (Original) A method according to claim 33 wherein the transmission data is acquired using a gamma ray source.

41. (Currently Amended) A method of acquiring attenuation data for correcting [[a]] nuclear image data, comprising:

determining an extent of an organ of interest in the body;

acquiring nuclear emission data over a first axially extending portion of the body larger than the organ of interest; and

acquiring transmission data over a second axially extending portion of the body for correcting said acquired emission data, responsive to the determined extent of the organ, said second portion being substantially smaller than the first portion.

42. (Original) A method according to claim 41 wherein determining an extent comprises acquiring a planar x-ray image.

43. (Previously Presented) A method according to claim 41 wherein the transmission data is acquired using an X-ray source.

44. (Original) A method according to claim 41 wherein determining an extent comprises acquiring a planar transmission gamma ray image.

45. (Previously Presented) A method according to claim 44 wherein the transmission data is acquired using a gamma ray source.

46. (Original) A method according to claim 41 wherein determining an extent comprises acquiring a planar nuclear emission image.

47. (Original) A method according to claim 41 wherein determining an extent comprises determining said extent from said acquired nuclear emission data.

48.-58. (Cancelled)

59. (New) A method according to claim 41 and including generating three dimensional emission values from the nuclear emission corrected by said transmission data.

60. (New) A method according to claim 30 wherein determining an extent comprises acquiring a planar nuclear emission image.

61. (New) A method according to claim 30 wherein determining an extent comprises determining said extent from said acquired nuclear emission data.

62. (New) A method according to claim 30 wherein the transmission data is acquired using an X-Ray source.

63. (New) A method according to claim 30 wherein the transmission data is acquired using a gamma ray source.

64. (New) A method of nuclear imaging, including acquiring attenuation data for correcting the nuclear image, comprising:

- acquiring nuclear emission data over a first axially extending portion of the body;
- determining the extent of a radioactive region of interest in the body; and

acquiring transmission data over a second axially extending portion of the body, responsive to the determined extent.

65. (New) A method of acquiring attenuation data for correcting a nuclear image, comprising:

determining an extent of an organ of interest in the body;

acquiring nuclear emission data over a first axially extending portion of the body larger than the organ of interest; and

acquiring transmission data over a second axially extending portion of the body, responsive to the determined extent of the organ, said second portion being substantially smaller than the first portion.